

Amendments to the Specification:

[0001] This application is a continuation of U.S. Nonprovisional Patent Application No. 09/608,806, filed June 30, 2000, which claims the benefit of U.S. Provisional Patent Application No. ~~60/141,755~~60/141,765, filed June 30, 1999, both of which are hereby incorporated by reference in their entirety.

[0052] Queries can call other queries, and they can be predefined to access almost the entire database, depending on the required complexity of the questions the queries will be called to answer. A more complex query can call another query that knows how to do one simple aspect of the complex query's task. Each query can also call as many iterators as necessary to answer that query's task. As an example of a simple query and iterator interchange, as illustrated in Figure 9, a query **34a** could ask a predefined question type, such as: "What is a city name for zip code 98052?" The type of question was predefined, but the actual blank was filled in by the customer application. The blank could also be filled in by a range of zip codes. The query **34a** then directs a first iterator **36b** to look for "98052" in the city state zip data crystal **38'**. The first iterator **36b** locates and supplies a reference or pointer that is then used by a second iterator **36a**, also directed by the original query **34a**, to find the actual data record desired. The second ~~query-iterator~~ **36a** then locates the data in the ~~city-crystal-38'~~ city crystal 38" and supplies the actual name of the city. In a simplified form, the steps illustrated above involve locating a zip code in one location, finding out where the city name is stored in a different location, and retrieving the city name from that storage location. The specific intricacies of the referencing or pointer structure are illustrated further in Figure 10.